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1. Selection of Students

In the USSR, membership in the Communist Party, or the Komsomol, always entitled applicants for admission to an institution of higher education to special consideration and privileges, as did proletarian origin and personal connections. If the applicant met all other requirements, his financial situation was unimportant, since scholarships and stipends could be easily obtained. In 1939, uniform tuition fees were 50X1 introduced for all college-level educational institutions. All students with a good academic background were eligible for the various scholarships then in existance, with Party and Komsomol members having preference. The most outstanding students (about one and one half per cent) received the so-called Stalin Scholarship which was from four to five times larger than the ordinary scholarship.

Secondary school grades did not play an important role. However, if a student was not an "Otlichnik" (excellent student) in the secondary school, he had to take an entrance examination before being admitted to a university or institute. About 30% of all applicants were in the "Otlichnik" class. The competitive type entrance examination played an important role in the admission of non-Otlichniks and non-Communists. It gave the authorities an opportunity to weed out all unacceptables and undesirables.

The well known universities and technical institutes were always first on the list of a student's choice. Consequently, entrance requirements for such institutions were higher because of the larger number of applicants. The next most desirable institutes were medical schools and following these came agricultural and teachers' colleges.

2. Textbooks

The technical textbooks in the USSR were of very good quality and were adequate in number. The quality of paper and print was poor, however. The ratio of new texts

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to old was progressively increasing each year. There were some books in Chemistry and Physics that were translated from German, English, and French. The majority, however, were of domestic (Soviet) origin. There were adequate problems and illustrations set forth in the texts, all of good quality. The technical books very rarely contained errors of substance.

3. Quality and Methods of Presentation of Chemistry Courses

There were about 1,000 students admitted annually at Kiev University. They were divided into ten or eleven major courses such as Chemistry, Physics, Law, etc. The chemistry course (or class) contained an average of 90 students. Lectures would be given to the class as a whole, while for laboratory work the class would be broken up into groups of 18 to 20 students each. All students received 36 hours of instruction in theory and laboratory weekly. Training aids were of fair quality and were adequate in supply. They were well utilized. No private tutors were available; however a student could obtain individual advice through consultations with his intructor. Each group of 18 to 20 students in the laboratories had an assistant professor assigned for guidance and supervision. Some graduate students were used as technical aides in the laboratories only.

4. Formality of Instruction

The formality of the professors depended upon their individual characteristics. However, they followed a pattern of strict observance of set rules and procedures inasmuch as deviation meant criticism and trouble.

5. Scope of Instruction

Area demands had no influence on the scope of instruction with the exception of certain language requirements, for a student could be sent anywhere in the USSR after graduation. Insofar as industrial requirements were concerned, these were taken into consideration in setting up the college programs for the respective courses.

6. Quality of Laboratory Instruction and Facilities

Laboratory classes numbered from 18 to 20 students. Each class received from 12 to 24 hours of laboratory instruction a week, or from 1/3 to 2/3 of total study. Graduate students were used for technical assistance in the laboratories. Each student was required to successfully complete certain laboratory problems and to write a report covering his work. Failure to submit such reports made a student ineligible to take the term or final examination.

7. Curriculum

Each chemistry student spent time on the following subjects as shown:

Analytical Chemistry - 600 hours per year
Inorganic Chemistry 200 hours per year
Organic Chemistry - 200 hours per year
Physical Chemistry - 250 hours per year

The individual work constituted about 75% of all laboratory study while 25% was given through group demonstrations. Before starting laboratory work a student had to pass a test proving he had the necessary theoretical background

Each chemistry student had to have six weeks of general practical training during his summer vacation of his third year and six weeks of special practical training during the summer vacation after his fourth year.

8. System of Examinations

All examinations were oral, with the exception of entrance tests and laboratory work, and were given at the end of each term. They covered all theoretical work studied and were objective. They were not standardized, varying with the individual professors. Political influence was present in marking, Party and Komsomol members receiving special consideration. A four grade system was used, the marks being excellent, good, satisfactory and unsatisfactory. The examination grades played a decisive part in the successful completion of the course.

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9. Employment of Leading Scientists in Education

There were many leading scientists teaching at the University of Kiev and various 50X1 institutes in Kiev up to 1941 [redacted] Many are still there. Some of these were as follows:

Nikolay N Boglyubov - Mathematics
Vladimir Yavorskiy - Organic Chemistry
(fnu) Shtukin - Organic Chemistry
(fnu) Kuryshko - Organic Chemistry
Efim Yakovlich Gorenbeyn - Physical Chemistry
Vladimir A Plotnikov - Physical Chemistry
A. V. Palladin - Bio-Chemistry
Llorion Mil Podorvan - Organic Chemistry
J Solomonvich - Balyasnyy- Organic Chemistry
(fnu) Rumyantsev - Chemistry (Z. A. Rumyantseva, Organic Chemist?)
Anotoly Petrovich Sementsov - Pharmacological Chemistry

Leading professors were often required to furnish advice and consult with industrial organizations and administrative agencies. All professors had a work load at their schools of about 400 hours a year. Instructors conducted graduate research and; in addition, had extra duties such as civic lectures, classes, etc. About half of their school work was spent on research. Some instructors were complete failures but held their positions because of Party membership or NKVD associations. Many, however, were good scientists, some, outstanding.

10. Research and Theses

At the beginning of every fiscal year a meeting was held by the staff of each faculty department at the University of Kiev. At this meeting each scientist would submit suggestions for research to be conducted. All such suggestions had to be practical in nature and have an economic significance; they could not be purely scientific. In addition, there was a financial limitation; the research program had to correspond to the amount allocated to the department. After 1936 a special fund was allocated for university research work. Out of this fund various departments were in turn allotted a certain amount. As an example, the Department of Analytical Chemistry received a fund of ten thousand rubles. This permitted five scientific teams to work on research in the department, each team being comprised of from three to five scientists, all staff members.

11. System of Coordination among Universities

Up until 1936 there was too little planning and coordination among universities and institutes. This was true of departments within a university and even of faculties. There was no central body responsible for avoidance of duplication of research and it was a weakness of the system. Attempts made to improve this situation were moderately successful. For example, a bulletin*was made up each year covering research approved and under way by all universities. Then, too, results of research of universities and institutes were published and made available to all university and institute libraries. Military research as well as industrial research institutes had their own system of controlling their work.*(an issue of this bulletin available upon request from 50X1 [redacted] research work was suggested by departmental staffs and was subject to the approval of the Chairman of the department. The scientist had to justify his work both from the practical and economic standpoint. An example of one such project was one in analytical chemistry; "Development of the Methods of Analysis of Organic and Inorganic Technically Significant Compounds - to be practically applied in that accurate and speedy methods could be adopted in the production of important compounds."

50X1 [redacted] No undergraduate worked in research as such, all of their work being routine, instructional problems. 50X1

12. Facilities for Conducting Classified Research

50X1 No university, [redacted] had the facilities for conducting classified research. The equipment was insufficient and too many people were involved. However, from time 50X1 to time [redacted] of Kiev were called upon to make a classified analysis 50X1 [redacted]

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13. Chemical Institutes in Kiev

The academic institutes affiliated with the University of Kiev did not include a chemical institute. Such chemical institutes in Kiev were affiliated with the Academy of Sciences; namely, Yavorskiy's Ins itute, Plotnikov's Institute (also known as the Organic and Physical Institute) and the Chemical Technological Institute.

14. Theoretical Theses

No theses of purely theoretical interest were acceptable and all subjects had to be approved by the respective department heads. Negative results were not acceptable. Party and Komsomol members received special consideration when certain dissertations were made by them. While the great majority of themes originated in the universities and institutes, some were requested by outside sources and came through the usual channels of the corresponding ministry. All theses were published if they were not classified. A board of judges and official opponents was appointed for each dissertation which was then publicly defended and discussed. /See sample research papers available on loan from CIA Library./

15. Graduation Requirements

A student had to have "satisfactory" grades in all subjects required by the specific curriculum in which he was enrolled to graduate. A thesis or research project report was not necessary for undergraduates since they obtained a diploma only and not a degree upon graduation. Political influence was always a factor for the party functionaries at a university to step in in the case of any question as to whether a Party or Komsomol member would graduate. A student had to be "loyal" not only to enter and remain at any educational institution, but also to graduate. He had o have "satisfactory" marks in political courses given to all students. I do not recall the percent of graduation failures at the University of Kiev. However, students who failed necessary courses were usually given an opportunity to make up these failures.

16. Graduate Assignments

Every university, institute, and educational institution had a quota to fill from their graduates. These quota assignments were made to certain areas or industries in accordance with an all-union plan. The university administration, the so-called "triangle" (university director, Party advisor, and trade union advisor) had the control of the allocation of graduates within this quota. The majority of chemistry graduates were sent to various industries. It was exceptional for industrial training to be given in coordination with academic training except for practical work during summer periods. It was also exceptional for graduates to be assigned to other institutions of higher learning, the exceptions usually being Party or Komsomol members who were retained for graduate work and instructors.

After graduation, those appointed as instructors had to participate in various seminars in which new theories, inventions and discoveries were discussed in order to keep them informed. There were, of course, always the published reports of domestic (Soviet) research to assist the graduate, although these were usually limited to the libraries of the educational institution or of the various industrial, ministerial libraries.

/Available on loan from CIA Library are research papers entitled " Uber die Verwendung von flussigen Amalgamen zur Untersuchung organischer Verbindungen" and "Attempt at Employing Liquid Zinc Amalgam in the Quantitative Analysis of the Nitro Group in Nitrobenzaldehydes."/

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